

THE CLAIMS

We claim:

1. A method for manufacturing a coated medical device having a coated portion which comprises the steps of:

- (a) obtaining a structure having an inner surface and an outer surface;
- (b) coating at least a portion of the inner or outer surface with a first coating material; and
- (c) ablating the coated structure with an ultrashort-pulse laser to form at least one opening therein to form the coated portion of the medical device.

2. The method of claim 1, wherein the structure is a tubular structure.

3. The method of claim 1, wherein the medical device is a stent.

4. The method of claim 1, wherein step (b) comprises only coating the inner surface of the structure with the first coating material.

5. The method of claim 1, wherein step (b) comprises only coating the outer surface of the structure with the first coating material.

6. The method of claim 1, wherein step (b) comprises:

- (i) coating the inner surface of the structure with the first coating material and
- (ii) coating the outer surface of the structure with a second coating material.

7. The method of claim 7, wherein the first coating material and the second coating material are the same.

8. The method of claim 1, wherein the first coating material is a coating composition and the surface is coated by dipping the surface into the coating composition.

9. The method of claim 1, wherein the first coating material is a coating composition and the surface is coated by spray-coating the coating composition onto the surface.

10. The method of claim 1, wherein the first coating material comprises a polymer and a biologically active material.

11. The method of claim 1, wherein the first coating material comprises a biologically active material, and the coating step (b) is conducted by immobilizing the first coating material onto at least of a portion of the surface.

5 13. The method of claim 1, wherein the coated structure is ablated to form a plurality of openings therein that define a plurality of struts.

13. The method of claim 1, which further comprises cutting the coated structure into sections to form more than one coated portion.

10 14. The method of claim 13, wherein the cutting step is conducted between coating step and the ablating step.

15 15. A method for manufacturing a coated medical device having a coated portion which comprises the steps of:

- 15 (a) obtaining a plate having a first surface and a second surface;
- (b) coating at least a portion of the first surface or second surface with a first coating material;
- (c) ablating the coated plate with an ultrashort-pulse laser to form at least one opening therein; and
- 20 (d) forming the coated portion with the ablated plate.

16. The method of claim 15, wherein the coated portion is a tube-like portion.

17. The method of claim 15, wherein the medical device is a stent.

25 18. The method of claim 15, wherein step (b) comprises only coating the first surface of the plate with the first coating material.

30 19. The method of claim 15, wherein step (b) comprises only coating the second surface of the plate with the first coating material.

20. The method of claim 15, wherein step (b) comprises:

- (i) coating the first surface of the plate with the first coating material and
- (ii) coating the second surface of the plate with a second coating material.

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21. The method of claim 15, wherein the first coating material and the second coating material are the same.

22. The method of claim 15, wherein the first coating material is a coating composition and the surface is coated by dipping the surface into the coating composition.

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23. The method of claim 15, wherein the first coating material is a coating composition and the surface is coated by spray-coating the coating composition onto the surface.

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24. The method of claim 15, wherein the first coating material comprises a biologically active material, and coating is conducted by immobilizing the first coating material onto at least of a portion of the surface.

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25. The method of claim 15, wherein the first coating material comprises a polymer and a biologically active material.

26. The method of claim 15, wherein the coated plate is ablated to form a plurality of openings therein that define a plurality of struts.

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27. The method of claim 15, which further comprises cutting the coated plate into sections to form more than one coated tube-like portion.

28. The method of claim 27, wherein the cutting step is conducted between the coating step and the ablating step.

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29. The method of claim 27, wherein the coated plate is cut as it is ablated.

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